

The Memento Pattern



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Overview



Complicated computer game

Hero dies!

Save game option

Memento pattern

- Snapshot of game state at point in time
- Restore the game to a previous snapshot
- Maintain encapsulation

Implement a simple memento for “I♥42”

Also known as the Token pattern



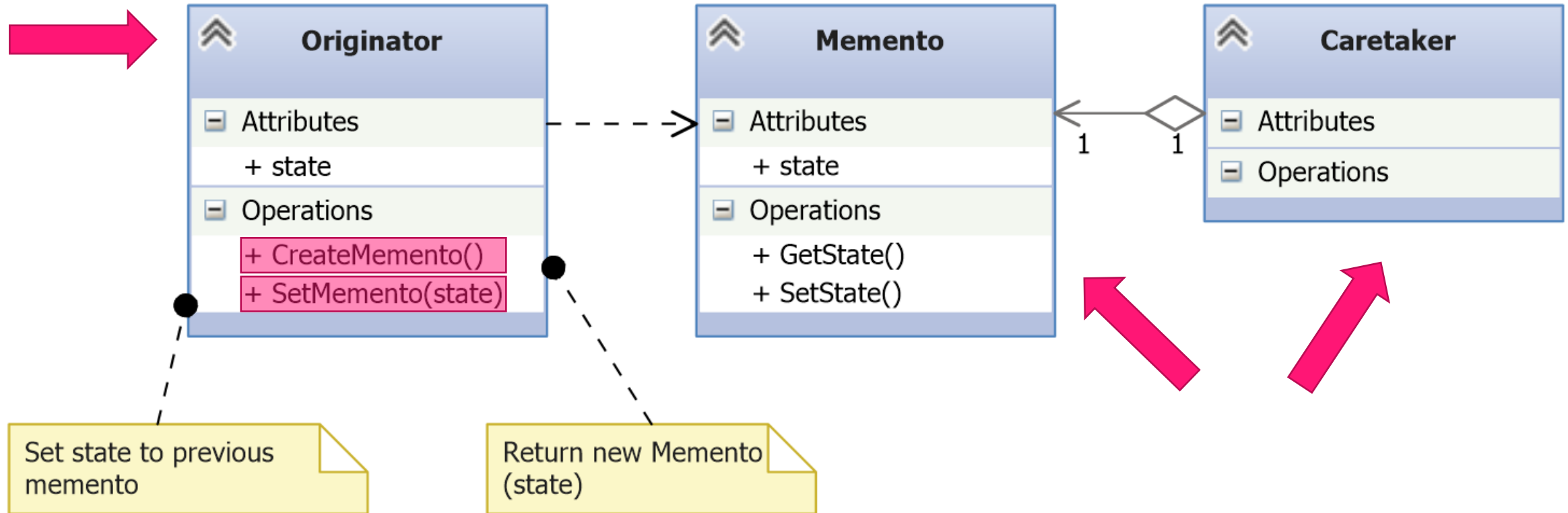
Demo



Naïve implementation of game save



Memento Pattern Structure



Demo



Use Memento to save/restore game state



Summary



Benefits

- Preserves encapsulation
- Simplifies the Originator class
- Easy-to-implement state restoration

Drawbacks

- Using mementos might be costly
- Caretaker class can be memory intensive
- Python introspection can break encapsulation